

IN THE CLAIMS

1. (Currently Amended) A method of producing an electron-emitting device having a carbon fiber, comprising:

(A) applying a liquid including dispersed particles onto a substrate;
and

(B) forming a carbon fiber by contacting the particles applied on the substrate with a carbon containing gas,

wherein each of said particles contains (i) Pd and (ii) at least one element selected from the group consisting of Fe, Co, Ni, Y, Rh, Pt, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, and Lu, and

wherein said liquid further contains a polymer.

2. - 3. (Canceled)

4. (Previously Presented) The method according to claim 1, wherein each of said particles contains said element by 5 atm% or more and 80 atm% or less (atomic percentage) with respect to Pd.

5. (Cancelled)

6. (Currently Amended) The method according to claim [[5]] 1, wherein said polymer is a water-soluble polymer.

7. (Currently Amended) The method according to claim [[5]] 1, wherein said polymer is any one selected from the group consisting of polyvinyl pyrrolidone, polyvinyl alcohol and polyacrylic acids.

8. (Original) The method according to claim 7, wherein said polyacrylic acids are any one selected from the group consisting of polyacrylic acid, polymethacrylic acid, and homologue thereof.

9. (Currently Amended) The method according to claim [[5]] 1, wherein said polymer is contained by 0.1 wt% or more and 30 wt% or less with respect to said liquid.

10. (Currently Amended) The method according to claim [[5]] 1, wherein said polymer is contained by 0.2 wt% or more and 10 wt% or less with respect to said liquid.

11. (Previously Presented) The method according to claim 1, wherein an average particle size of the particles is 1 nm or more and 100 nm or less.

12. (Previously Presented) The method according to claim 1, wherein an average particle size of the particles is 1 nm or more and 50 nm or less.

13. (Previously Presented) The method according to claim 1, wherein an average particle size of the particles is 1 nm or more and 20 nm or less.

14. (Currently Amended) The method according to claim [[5]] 1, wherein said polymer covers the particles by average film thickness in a range of 2.5 nm or more and 25 nm or less.

15. (Original) The method according to claim 1, wherein said particles are contained by a ratio of 1 g/L or less with respect to said liquid.

16. (Original) The method according to claim 1, wherein said particles are contained by a ratio of 0.1 g/L or less with respect to said liquid.

17. (Original) The method according to claim 15, wherein said particles are contained by a ratio of 0.01 g/L or more with respect to said liquid.

18. (Canceled)

19. (Canceled)

20. (Previously Presented) A method of producing an electron-emitting device having a carbon fiber, comprising

(A) applying a liquid including a polymer and a plurality of catalytic particles onto a substrate; and

(B) forming a carbon fiber by contacting the catalytic particles with a carbon containing gas.

21. (Original) The method according to claim 1, wherein said carbon fiber is any one of a carbon nano tube, a graphite nano fiber, an amorphous carbon fiber, and a diamond fiber.

22. (Original) A method of producing an electron source having a plurality of electron-emitting devices, wherein said electron-emitting devices are produced by the method of producing an electron-emitting device according to claim 1.

23. (Original) A method of producing an image-forming apparatus comprising an electron source, and an image-forming member disposed facing said electron source, wherein said electron source is produced by the method of producing an electron source according to claim 22.

24. - 28. (Canceled)

29. (Previously Presented) The method according to claim 20, wherein said particles contain (i) Pd and (ii) at least one element selected from the group consisting of Fe, Co, Ni, Y, Rh, Pt, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, and Lu by 5 atm% or more and 80 atm% or less (atomic percentage) with respect to Pd.

30. (Previously Presented) The method according to claim 20, wherein said polymer covers the particles.

31. (Previously Presented) A method of producing an electron source having a plurality of electron-emitting devices, wherein said electron-emitting devices are produced by the method of producing an electron-emitting device according to claim 20.

32. (Previously Presented) A method of producing an image-forming apparatus comprising an electron source, and an image-forming member disposed facing said electron source, wherein said electron source is produced by the method of producing an electron source according to claim 31.

33. - 36. (Canceled)

37. (New) A method of producing an electron-emitting device having a carbon fiber, comprising:

(A) applying a liquid including dispersed particles onto a substrate;

and

(B) forming a carbon fiber by contacting the particles applied on the substrate with a carbon containing gas,

wherein each of said particles contains (i) Pd and (ii) at least one element selected from the group consisting of Fe, Co, Ni, Y, Rh, Pt, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, and Lu, and said particles are contained by a ratio of 1 g/L or less with respect to said liquid.

38. (New) The method according to claim 37, wherein said particles are contained by a ratio of 0.1 g/L or less with respect to said liquid.

39. (New) The method according to claim 37, wherein said particles are contained by a ratio of 0.01 g/L or more with respect to said liquid.

40. (New) A method of producing an electron source having a plurality of electron-emitting devices, wherein said electron-emitting devices are produced by the method of producing an electron-emitting device according to claim 37.

41. (New) A method of producing an image-forming apparatus comprising an electron source, and an image-forming member disposed facing said electron source, wherein said electron source is produced by the method of producing an electron source according to claim 40.